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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/687,445	10/13/2000	Charles Lee Asplin	ASPL-007	1343

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EXAMINER
ADDIE, RAYMOND W

ART UNIT	PAPER NUMBER
3671	

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/687,445	ASPLIN, CHARLES LEE	
	Examiner	Art Unit	
	Raymond W. Addie	3671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 April 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7, 12, 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asplin # 5,860,763 in view of Wildon # 5,558,474 and Poulter # 1,915,032.

Asplin discloses a method and apparatus for raising a sunken section of concrete, such as a sidewalk or driveway, by dispensing mason's sand, under pressure from a sand blasting apparatus, in order to raise and support the sunken pavement.

Although Asplin discloses the use of a "sand blaster"; Asplin does not disclose the structural details of said sand blaster.

However, Wildon discloses a sand blasting apparatus for dispensing sand under pressure, the system comprising:

A sand storage tank (11) having a sand outlet (12).

A compressed air source (such as a compressor driven by an internal combustion engine).

A mixing chamber (17/14a/13) connected to the sand outlet and compressed air source.

An elongate air and sand delivery line (14) connected to said mixing chamber.

An injector gun having a valve (21) and a gun nozzle for the delivery of sand/air mixture.

Therefore, it would have been obvious to provide the apparatus and method of raising concrete slabs, of Asplin, with a sand blasting device, as taught by Wildon, in order to provide sufficient lifting and penetration force to the sand being dispensed.

Although Asplin in view of Wildon discloses dispensing sand under concrete slabs, that have been previously raised by a plurality of jacks, Asplin in view of Wildon does not disclose is dispensing sand through a concrete slab using a threaded nozzle to form an airtight seal with the concrete slab.

However, Poulter teaches 2 preferred methods and means for correcting sunken pavement. At least one of said means comprising a sand pump (4) and injection means (3), in the form of a threaded nozzle. Said nozzle being connectable, in a fluid tight manner with a drilled hole (2) in the pavement, via a correspondingly threaded sleeve (3), which may be pounded through a previously drilled hole.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the method and apparatus of Asplin in view of Wildon, with an airtight, sand-dispensing connection device, as taught by Poulter, in order to inject a fill material under pressure, into a subgrade thereby raising a sunken pavement, in one of many known methods. See Poulter col. 2; fig. 1.

In regards to Claims 12, 17 Asplin discloses a method of raising sunken pavement by dispensing sand, under pressure underneath said sunken pavement, utilizing a sand blasting apparatus. What Asplin does not disclose are the functional requirements of the sand blasting apparatus.

However, Wildon discloses a method of dispensing a fill material, such as sand, under pressure. Said method comprising the steps of:

Supplying a storage tank (11), filled with a well-dried sand. Said tank having an outlet.

Supplying a compressed air source in fluid tight connection with said outlet.

Mixing a well known fill material with said compressed air.

Delivering said sand/air mixture to an injector gun (15), having a nozzle,

via an elongate hose (14).

Drilling a hole in said slab to be leveled or raised.

Attaching said gun nozzle to said drilled hole via a hose (24).

What Asplin in view of Wildon does not disclose is dispensing the pavement through a drilled hole in the sunken section of pavement.

However, Poulter teaches a method of raising a sunken pavement

comprising the steps of:

Drilling a hole (2) through a slab (1) to be raised.

Attaching said gun nozzle to said drilled hole.

Operating said injector gun in bursts so as to provide compressed air sufficient to

temporarily lift said slab and deliver a quantity of sand to permanently fills under said raised slab. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the method of dispensing sand of Wildon, with the method steps of supplying a sand/air mixture through an elongate hose and gun nozzle, through a sunken section of pavement, as taught by Poulter, in order to raise a sunken pavement. See Poulter col. col. 2, lines 50-col. 3, line 38.

In regards to Claims 18-20 Asplin discloses it is desirable to use a sand blasting device to raise sunken pavement, but does not specifically disclose how the sand blasting device is used. However, Wildon discloses the step of adjusting a sand shutoff valve so as to control the flow of sand to the mixing chamber. See col. 2, lines 22-40. Poulter teaches the step of drill a 2nd strategically placed hole in said slab. Moving said gun nozzle to said second hole and repeating said operating step. See col. 2, line 90-col. 3, line 43. Poulter further teaches the step of patching said holes (2) with a plug (5). Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the method of raising sunken pavement of Asplin, with the steps of injecting fill material through the sunken pavement, as taught by Wildon and Poulter, in order to substantially fill the void under the sunken pavement with dense sand.

2. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asplin in view of Wildon and Poulter # 1,915,032, as applied to claim 7 above, and further in view of Chitjian # 4,646,482.

Asplin in view of Wildon and Poulter discloses providing a sand blasting gun and nozzle to the dispensing hose, but does not disclose the specific structure of the sand blasting gun. However, Chitjian teaches a recirculating type sand-blasting machine (10), having a mixing chamber mounted on a cart and a dispensing gun assembly (18) further comprising:

A smaller air source hose (pc) fitted inside a larger diameter sand outlet (116) in order to draw sand, from a storage tank by Venturi effect.

Therefore, it would have been obvious to one of ordinary skill, in the art, at the time the invention was made to provide the sand delivery system of Asplin in view of Wildon and Poulter, with the mixing chamber as taught by Chitjian, in order to facilitate provide a consistent supply of sand under consistent pressure.

3. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asplin in view of Wildon and Poulter and Chitjian, as applied to claim 8 above, and further in view of Casella # 5,974,611.

Asplin in view of Wildon Poulter and Chitjian, discloses the use of a air compressor, a plurality of flow control (shutoff) valves (13, 18, 21) throughout the sand dispensing

system in combination with a venturi type sand blasting gun, but does not disclose providing the system with a plurality of pressure relief valves. Casella discloses the use of a plurality of pressure relief valves in combination with a venturi system (46, 47), for general safety of the operator. Therefore, it would be obvious to one of ordinary skill in the art, at the time the invention was made, to provide the sand discharging system of Asplin in view Wildon and Poulter and Chitjian, with a plurality of pressure relief valves and/or a venturi system, as taught by Casella, in order to prevent over-pressurization of the system.

4. Claims 13-16, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asplin in view of Wildon and Poulter, as applied to claim 12 above, and further in view of Feldsted # 4,466,760.

Asplin in view of Wildon and Poulter discloses essentially all that is claimed except for a pressure relief valve disposed between a compressed air source and a sand outlet of a sand storage tank. However, Feldsted teaches a mobile material handler (01). Said apparatus comprising a compressed air supply line (24) having a relief valve (not shown) disposed between an air compressor and a dry material storage tank and a venturi assembly (40) to prevent overpressure within the storage vessel (34).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the method of raising and lifting a slab of Asplin in view of Wildon and Poulter, with a pressure relief valve as taught by Feldsted, in order to ensure the pressure within the storage vessel does not exceed a predetermined pressure. See Feldsted col. 3, lines 52-60; col. 4, lines 25-29.

In regards to Claims 15, 16 Asplin in view of Wildon and Poulter teaches supplying a sand shutoff valve (13) between said sand storage tank (11) and said mixing chamber (14a/17) and the step of adjusting said sand shutoff valve so as to control the flow of sand to said mixing chamber. See col. 2, lines 10-24.

Response to Arguments

5. Applicant's arguments with respect to claims 7-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Addie whose telephone number is (703) 305-0135. The examiner can normally be reached on Mon-Fri from 6:30 am to 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Will, can be reached on (703) 308-3870. The fax phone number for this Group is (703) 305-3597.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1113.

Thomas B. Will
Supervisory Patent Examiner
Group 3600

RWA
4/11/2003